

Cost Effectiveness of Siponimod for Secondary Progressive Multiple Sclerosis in Turkey

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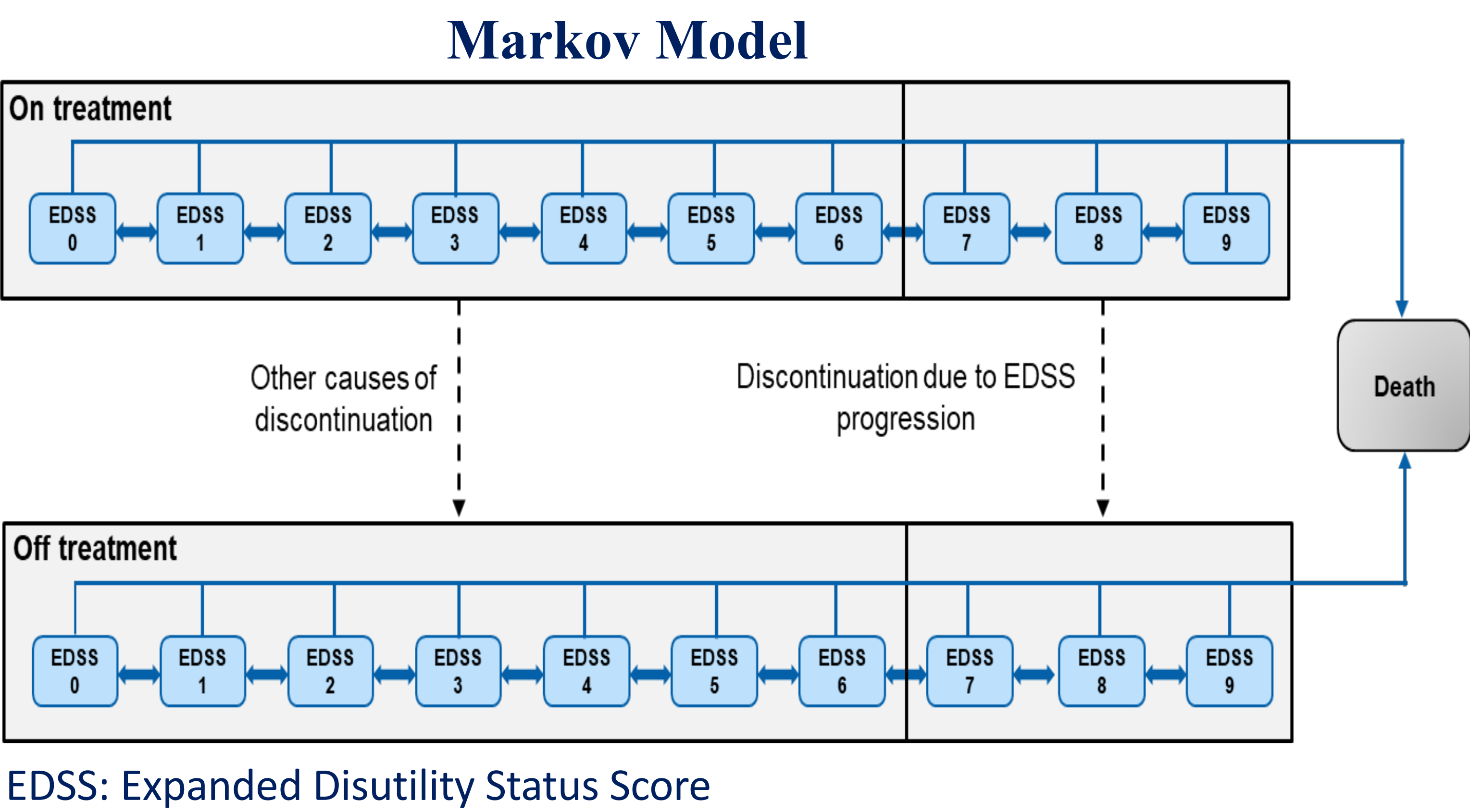
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OBJECTIVES

Multiple sclerosis is a neurodegenerative disorder with high economic and social burden due to its potential to cause severe disability. Around 85% of cases start as relapsing remitting MS (RRMS) but increasing number of patients gradually convert to secondary progressive MS (SPMS). The objective of this study is to evaluate the cost effectiveness of siponimod vs natalizumab for SPMS from the Turkish public payer’s (SGK) perspective.

METHODOLOGY

A discrete-time Markov chain model was designed. The model duration was lifetime with a cycle length of one year. Both costs and outcomes were discounted at 3%. A matching indirect comparison was performed to compare siponimod results from the EXPAND study and natalizumab results from the ASCEND study for effectiveness in patients with active SPMS. Treatment costs included drug acquisition costs (reimbursement prices), drug administration and monitoring costs, disease management costs by EDSS scores, adverse event costs and relapse costs. A health care resource utilization tool was designed and completed by experts to estimate the costs. All costs were calculated based on the reimbursement rules and price tariffs of the SGK.



RESULTS

Incremental Cost Effectiveness Ratio (ICER): Life Years

	Cost (TRY)	Incremental Cost (TRY)	Life Years	Incremental Effectiveness (Years)	ICER
Siponimod	1,394,855	119,765	13.02	0.47	254,065
Natalizumab	1,275,090		12.55		

Incremental Cost Effectiveness Ratio (ICER): QALYS

	Cost (TRY)	Incremental Cost (TRY)	QALYS	Incremental Effectiveness (QALYS)	ICER
Siponimod	1,394,855	119,765	5.06	0.68	177,371
Natalizumab	1,275,090		4.39		

Turkey does not have an official threshold to be used in cost-effectiveness analyses. The GDP per capita was 85.672TRY in 2021. Based on the GDP per capita threshold (three times the GDP per capita= 257.016 TRY) siponimod is a cost-effective option for treatment of secondary progressive MS in Turkey.

Probabilistic Sensitivity Analysis Results

More than 80% of the results have fallen to the second quadrant, indicating that the results were robust.



DISCUSSION

This study has evaluated the cost-effectiveness of Siponimod compared to natalizumab in treatment of secondary progressive multiple sclerosis in Turkey. Siponimod, which significantly reduced the risk of disability progression compared to placebo in the EXPAND Phase III clinical trial, is a cost-effective option in Turkey.

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